WATER TEMPERATURE AND WATER QUALITY MONITORING

DESCRIPTION:

- Develop temperature and/or water quality models for streams and creeks in the region
- Models will simulate responses to alternative conditions including flow, urban and agricultural development, and restoration efforts
- Models will be developed with the NCRWQCB
- Water quality constituents to be simulated include: temperature, ammonia, nitrate, phosphate, phytoplankton, dissolved oxygen, dissolved and particulate organic material, and turbidity

PARTNERSHIPS:

- California Regional Water Quality Control Board, North Coast and San Francisco Bay regions
- Sonoma County Water Agency

PROJECT GOAL

Help regional recovery planning efforts by prioritizing which streams would benefit the most from restoration projects, facilitate water quality analyses for the Russian River Section 7 Consultation, and assist the California Regional Water Quality Control Board, North Coast Region with amending the Russian River Basin Plan.

Russian River near Duncan's Mills

Water quality and temperature modeling will simulate water quality responses in stream reaches in the Russian River and San Pablo Bay watersheds, and selected coastal streams to evaluate potential water quality impacts under varying conditions.

The models will base daily average flows on reservoir operation data, stream gauge data and monthly consumptive use. Flows will be allocated to tributaries based on drainage area.

Russian River near Cloverdale

Russian River at Johnson's Beach

Specific model types that will be used for the project include the water quality simulation model (HEC-5Q), stream network temperature model (SNTEMP), stream segment temperature model (SSTEMP), Basin Temp or GIS-based modeling approaches.